Luis Angel Guerrero Hoyos

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About Me

I am a Civil-Geological Engineer with 5+ years of experience in geospatial data, GIS, remote sensing and geotechnical engineering. I hold a MSc degree in Civil Engineering from the University of Washington and a BSc degree in Geological Engineering from the Universidad Nacional de Colombia. I excel in both autonomous and team-based learning environments; with outstanding interpersonal, written, and communication skills. I am adaptable to change and committed to continuous improvement. My creative and innovative mindset is focused on problem-solving, particularly within the realms of geospatial analysis, data engineering, geophysics, geotechnical engineering, and risk management. In addition to my academic and professional pursuits, I have a love for football, both as a player and a fan.

Skills

- **Geospatial Tools:** QGIS, ArcGIS, Pix4D, CloudCompare, InSAR: dolphin, PyGMTSAR
- **Geotechnical Tools:** Slide, Plaxis, gINT, Cliq, LiqSVs, Deepsoil, ProShake
- **Programming:** Python, GitHub, Matlab, VS Code, AI
- **Frameworks & Libraries:** Geopandas, Rasterio, Xarray, Gdal
- **Databases:** SQL, PowerBI
- **Soft Skills:** Problem-solving, adaptability, decision-making, communication, leadership, innovation, team player, relationships management

Experience

Staff Geotechnical *(July 2025 - Present)* — Shannon and Wilson Inc

- Contributing to the development of research tools for LiDAR change detection using ICP registration and M3C2, and InSAR using Dolphin and PyGMTSAR, aimed at enhancing business opportunities in remote sensing.
- Geotechnical boring logs, site investigation and site reconnaissance.

Research Assistant and Scientist *(August 2023 - June 2025)* — University of Washington

- Investigating the geospatial relationships between earthquake-induced landslides and their reactivations.
- Interaction with geospatial data types, both rasters (GeoTIFF and satellite imagery) and vectors (GeoJSON, geopackage, shapefiles).

Geotechnical Intern *(June 2024 - September 2024)* — Terracon Consultants Inc

- Site reconnaissance and investigations, project scoping, budgeting, logging, geotechnical proposals and report preparation.
- Geotechnical earthquake analysis: site response and liquefaction.

Geotechnical Monitoring Analyst *(July 2021 - August 2023)* — Hexagon Geospatial

- InSAR data analysis and management from ground-based georadars.
- Real time geotechnical monitoring of pit slopes and tailing dams using ground-based interferometric radars, robotic total stations and GNSS.
- Technical support to the customer regarding monitoring, equipment, system, and software.
- Daily, weekly, and monthly report instable areas to the customer after the analysis for decision-making.

Geological Engineer *(January 2019 - July 2021)* — South32

- Plan and supervise drilling campaigns.
- Managemement and data entry of GIS databases that were needed for mineral resource estimation and decision-making.

Education

- **Master of Science in Civil Engineering**
  University of Washington
  June 2025

- **Bachelor of Science in Geological Engineering**
  Universidad Nacional de Colombia (UNALMED)
  May 2019

Awards & Certifications

- InSAR Processing and Analysis (ISCE+) - EarthScope Consortium & NSF, August 2024
- CEE Departmental Graduate Fellowship - University of Washington, September 2023
- InSAR and RAR Radar Monitoring - University of Arizona, December 2020

Languages

- English (Fluent)
- Spanish (Native)